WorkCAD3 Configurator

User Manual - Version1.3

SYMBOLS

The following symbols are used in this document:

This symbol notifies the user about the instructions that must be followed strictly to ensure the correct installation or operation of the product.

This symbol notifies the user about additional information or optional instructions.

WELCOME TO WORK PRO

Thank you for choosing the WORK PRO WorkCAD3 Configurator.

This document contains essential information about the use of the software. Read this document carefully to become familiar with it.

Please check regularly the WORK PRO website to download the latest version of the document and software updates: https://www.workpro.es/

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1. Introduction

WorkCAD3 is the configuration and control software for devices from the BlueLine MKII and LightMouse series, by WORK PRO. WorkCAD3 presents the following improvements with respect to its predecessor WorkCAD Designer:

- Inclusion of all BlueLine, BlueLine MKII, LightMouse and WPE devices for configuration and control.
- **WorkCAD3 Configurator**. Application dedicated to the configuration of network devices.
- **WorkCAD3 Editor**. Application dedicated to the creation of customizable layouts for the end user.
- **WorkCAD3 Player**. Application dedicated to the execution of layouts created with WorkCAD3 Editor.

2. Installation

Download the latest version of WorkCAD3 from the WORK PRO website and click on the installation file **WorkCAD3_Setup.exe**. Follow the instructions of the wizard for a correct installation.

Once the installation is done, go to the folder **C: \ Program Files (x86) \ WorkCAD3** where you will find the executable files of the different applications that form WORKCAD3:

Configurator.exe

Editor.exe

Player.exe

If you wish, you can create shortcuts to access the executable files for quicker access.

2.1. System requirements

- Operative system: Windows 7 (32 bits) or higher.
- Free 256MB in your hard disk.
- 2 GB RAM memory.
- 1280 x 960 px screen resolution.

3. WorkCAD3 Configurator

WorkCAD3 Configurator is the application that will allow you to configure the devices within your installation. WorkCAD 3 Configurator allows:

- Configuration at the network level.
- Firmware update.
- Configuration of each device according to its features.

3.1. Configuration at the network level

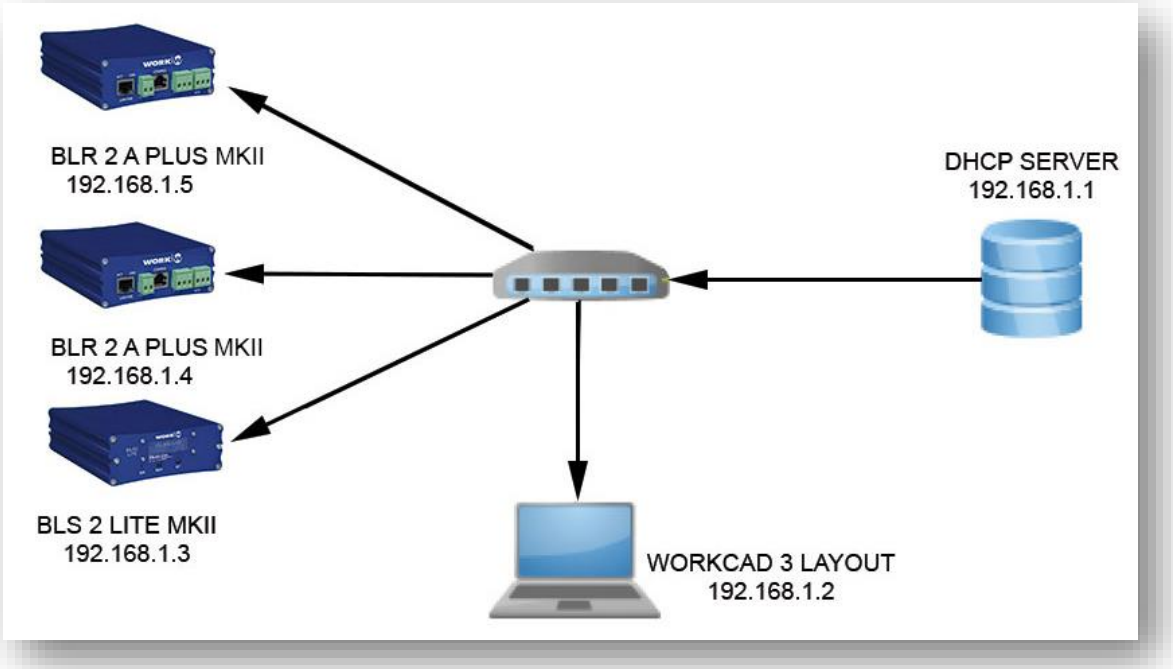
The BlueLine MKII and LightMouse devices can work with dynamic IP address or with static IP address. By default, both modes are activated, so the devices will try to connect using their dynamic IP, and if they do not succeed, they will try to connect using their static IP.

The first thing you should do is connect your PC with the installed WorkCAD3 Configurator to the devices to be configured using a switch.

WPE 24 and WPE 44 devices have only the static IP activated by default.

3.1.1. Configuration with dynamic IP

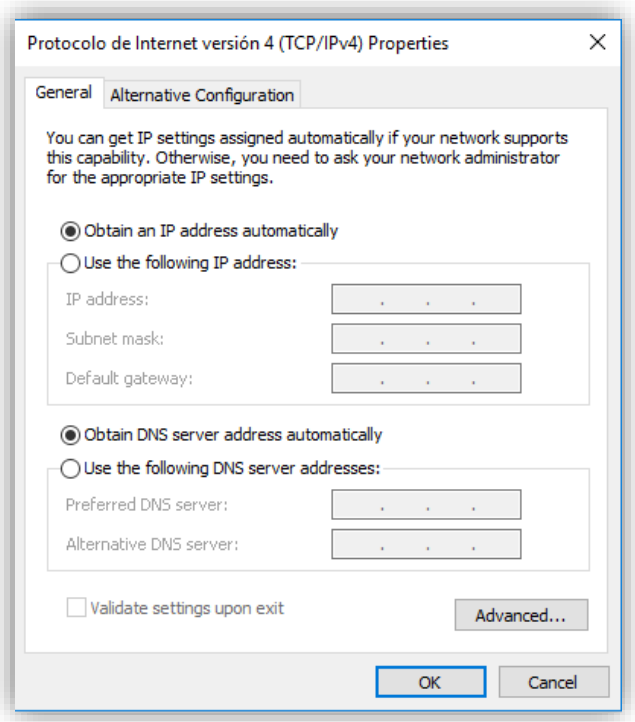
For a configuration with dynamic IP address, your LAN must contain a DHCP server that is responsible for assigning IP addresses to the different devices.



Keep in mind that a configuration with dynamic IP may not be a good choice, since depending on the configuration of the DHCP server, it can assign a different IP address to the devices each time they are restarted. Therefore, if we have OSC commands programmed to be sent to specific IP addresses, or if we are using the WorkCAD3 Player application to control the devices, when the IP addresses are renewed, the programmed OSC commands will not reach the target devices, or the application workCAD3 Player will not connect to the devices.

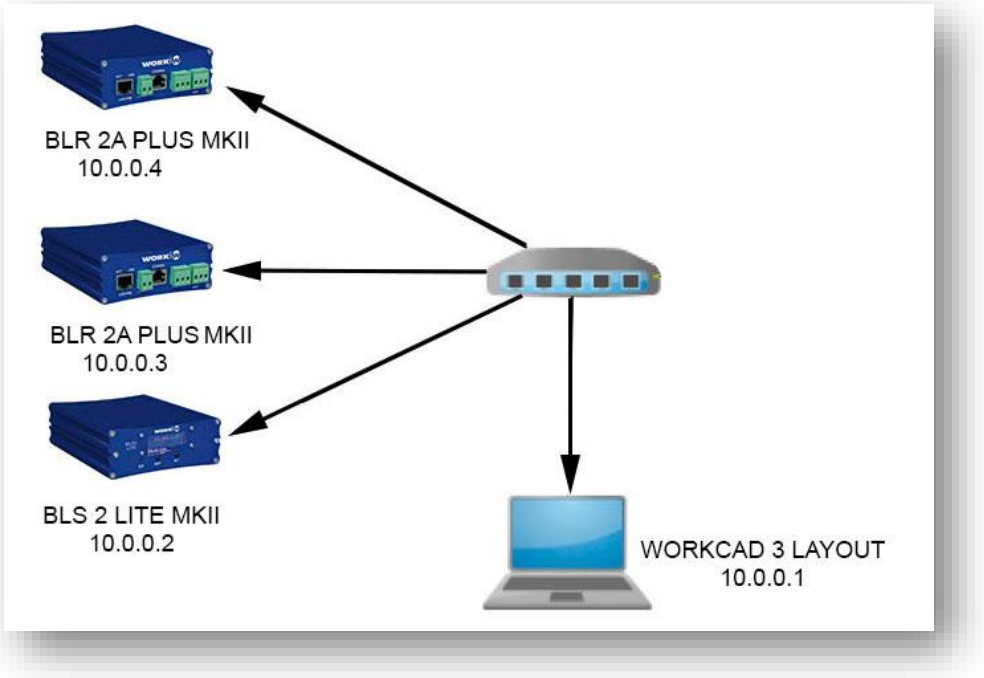
Therefore, it is recommended that, in case of using the dynamic IP in the devices, the DHCP server is configured to assign the IP addresses according to the MAC address of each device. In this way, the devices will always receive the same IP address from the DHCP server.

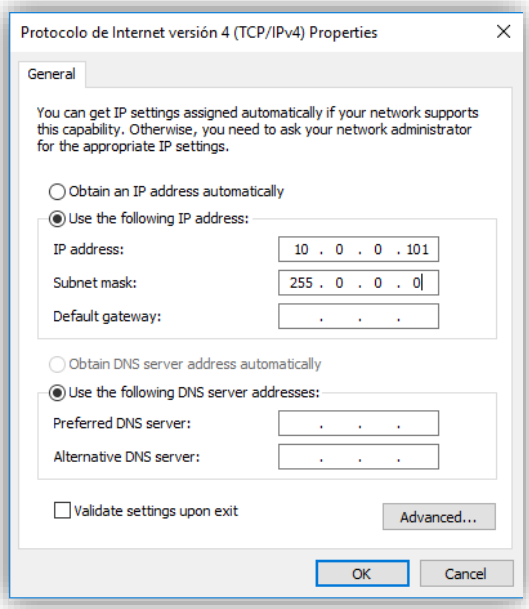
On the other hand, if you want your PC also work with dynamic IP address, go to the Network Center and Shared Resources / Connection: Ethernet / Internet Protocol Properties 4 (TCP / IPv4) on your PC Windows) and configure the IP address of your PC as dynamic. Once the DHCP server has been configured, you can run WorkCAD3 Configurator and start the device configuration



3.1.2. Configuration with static IP

If you want to work with static IP, you must first change the IP address of your PC to the subnet where BlueLine devices (10.0.0.0/8) are by default. Therefore, go to the Network Center and Shared Resources / Connection: Ethernet / Internet Protocol Properties 4 (TCP / IPv4) on your PC (Windows) and configure the static IP of your PC.



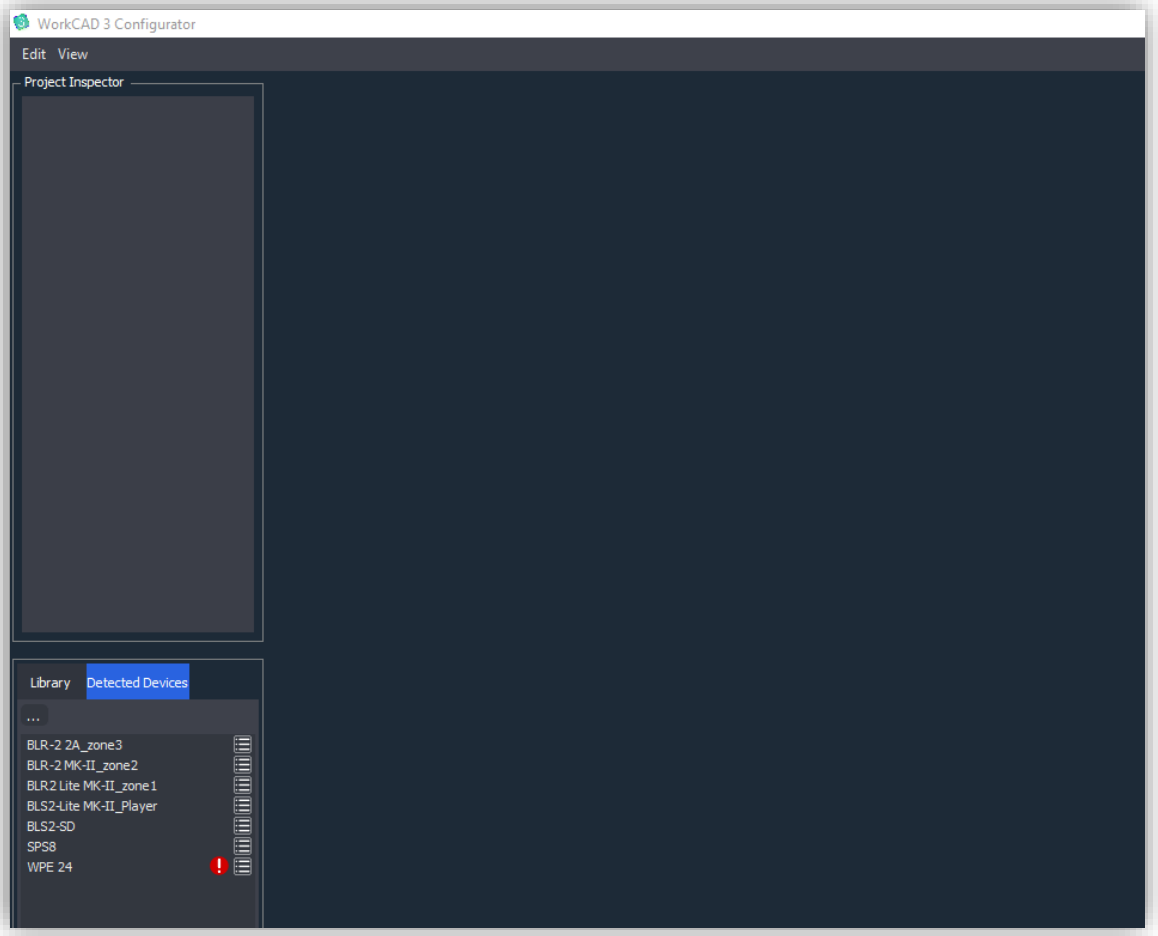


Once the static IP address of your PC is configured, you can run WorkCAD3 Configurator and start the device configuration.

3.2. Devices configuration

Once you have made the IP level configuration of your PC, proceed to execute WorkCAD3 Configurator.

Next, you will find the following sections:



- Edit:
    - **Show Device Updates.** It allows to see the devices that can updated its firmware.
- View:
    - **Show Log.** It allows to show the log window.
    - **View Options.** It allows to show the options window.
        - **Check for updates on startup.** The software will warn you about updates (It needs Internet connection).
        - **Enable Advance Techical Options.** It allows to see the advanced options.
            - Force Broadcast message.
    - **About.** It shows the software version and updates checking.

- **Library.** Tab to access examples of the different devices that can be configured with WorkCAD3 Configurator.

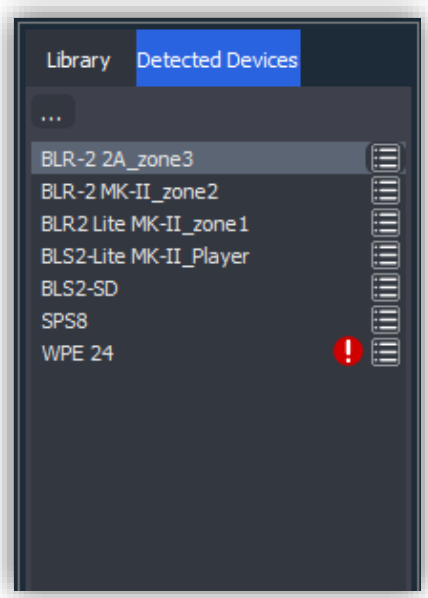
- **Detected Devices**. Tab where all the devices of your LAN will appear. If one of these devices is not in the same subnet as your PC, an exclamation mark will appear indicating it.

- **Project Inspector**. Area with the devices to configure. To move the devices from *Detected Devices* to *Project Inspector* you must double click on them. **Only devices that are on the same subnet as your PC can be moved to the Project Inspector.**

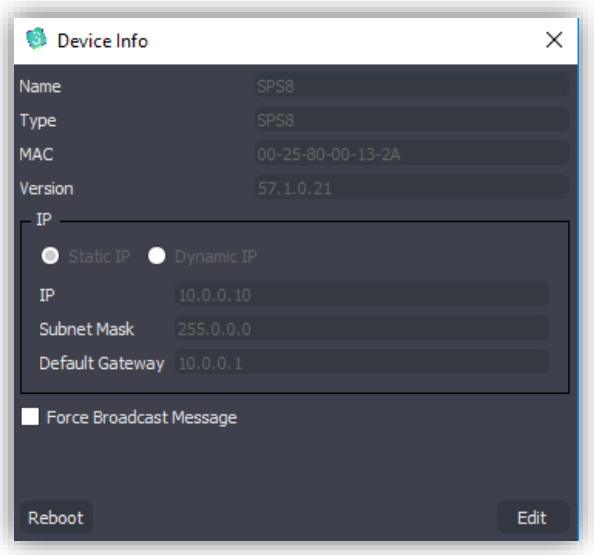
3.3. Device info

Before starting to configure the devices with their configuration interface through the Project Inspector, it is recommended to configure them at the IP and name level.

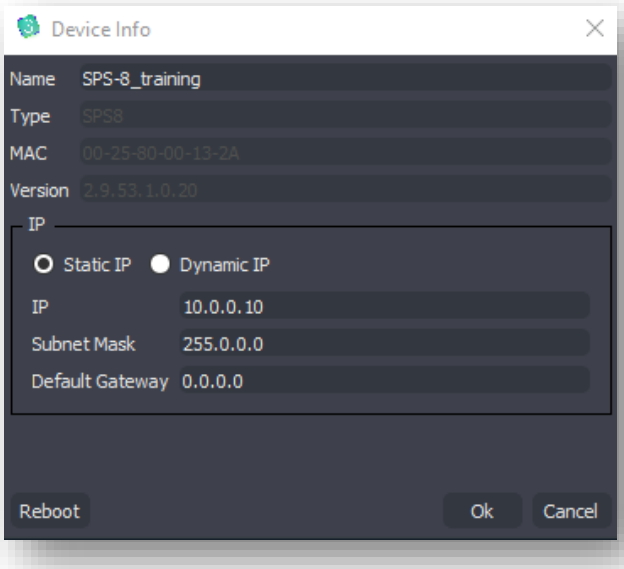
To do this, click on the Info button , on the right side.



Once the Info button is clicked, the Device Info window will open.



- **Name.** Name of the device. Editable field. To modify this area, click on the Edit button.
- **Type.** Type of device. Editable field.
- **MAC.** Physic direction of the device. Not editable field.
- **Version.** Device firmware version. Not editable field.
- **IP.** Device IP configuration. To modify this area, click on the Edit button.



- **Static IP radio button.** Selection of static IP address for the device.
- **Dynamic IP radio button**. Dynamic IP address selection for the device.
- **IP**. Device IP address, only editable in *Static IP mode*.
- **Subnet Mask**. Device Subnet, only editable in *Static IP mode*.
- **Default Gateway**. Default Gateway, only editable in *Static IP mode*.
- **Force Broadcast Message**. It allows to change the device IP address through a broadcast packet. You should use it in case that a third-party device has the same IP. To enable this option, go to *Enable Advance Techical Options*, into *View Options*.

Once the changes have been made, click on the OK button so that the device saves the changes made. The device will automatically reboot. If you want to discard the changes made, click on the Cancel button.

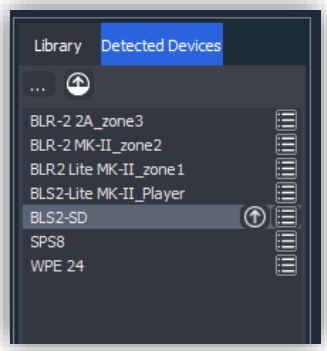
Make the proper configuration for all your devices.

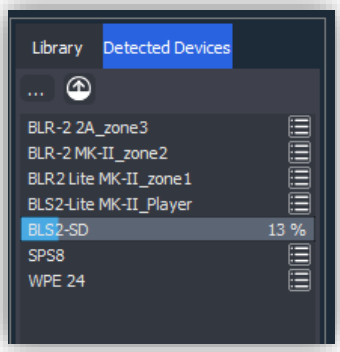
It should be noted that, although each device has its static and dynamic IP address enabled by default, once one of them is chosen in the Edit mode, the device will only work with the IP type chosen.

3.4. Updating the devices

In order to know if there are available firmware updates go to *Edit* menu and click on ***Show Device Updates***.

If there is a firmware update for your device, WorkCAD3 Configurator will warn you with the Update icon. Click on the icon to update the device. A loading bar will show you the percentage of updating done. Please do not turn off the device during this process.





If there is more than one device to update, you can update all of them by clicking on the *Update All* button. .

Keep in mind that, in order to update the firmware of the devices, your PC must be in the same subnet as the devices.

If an error occurs during the firmware updating workCAD3 Configurator Will warn you with an exclamation mark and the message Corrupted Memory /re-update, in the Network Status Report. Please proceed to re-update the device.

3.5. Project configuration

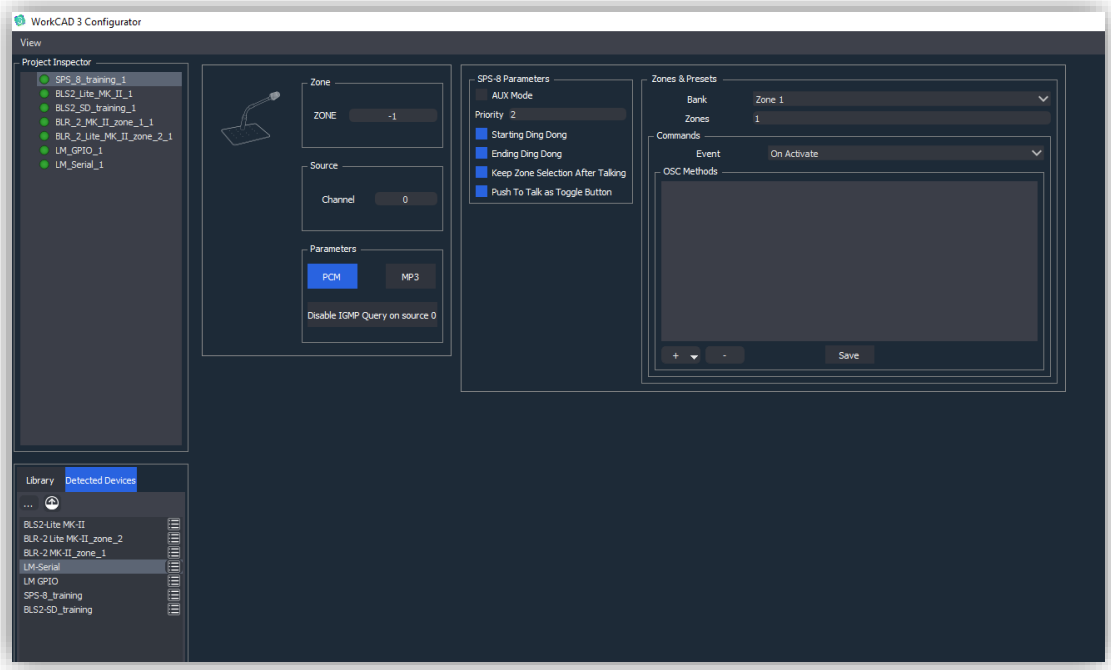
After carrying out the firmware updates and name or IP changes (in case they would be necessary), you can proceed to configure the devices.

Each device consists of a configuration interface for setting up. It is important to emphasize that **the modifications of the devices will always be stored in the device itself. WorkCAD3 Configurator application is a modification tool and does not store information, for BlueLine and LightMouse devices.**

3.5.1. Access to configuration interfaces

To access the configuration interface, follow the next steps:

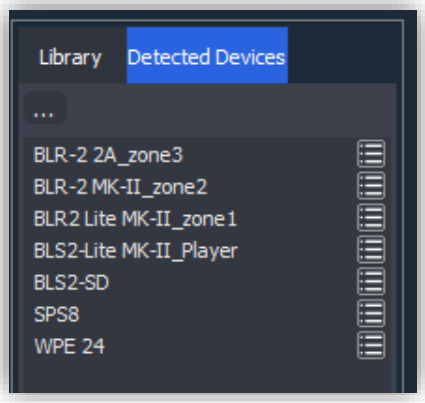
1. Make sure your computer is on the same subnet as the devices.
2. Double click on the devices you want to access to upload them to the Project inspector.
3. Once uploaded to the Project inspector, click on the device and the configuration interface will be displayed.

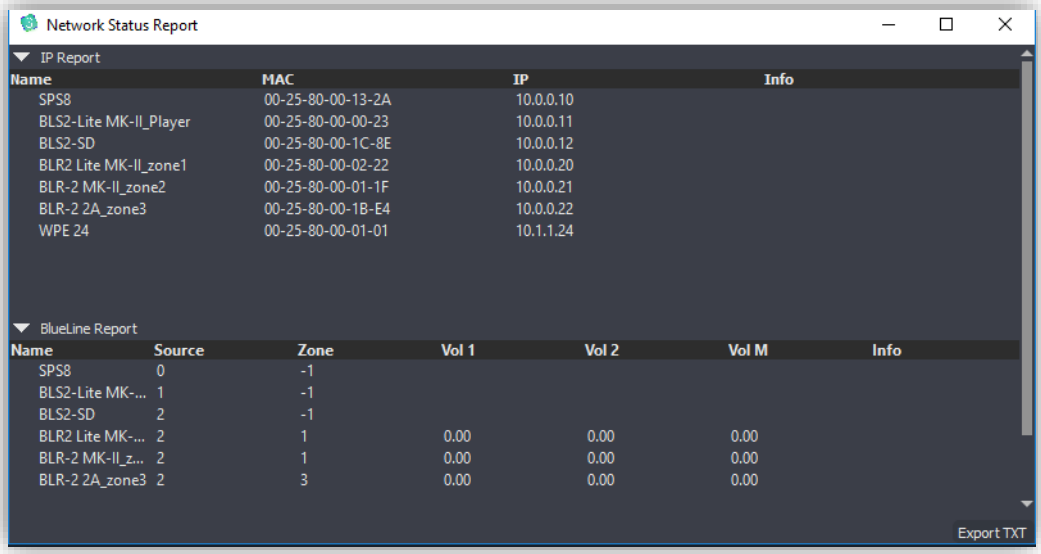


To know the operation of each one of the interfaces, go to the individual manual of each device.

3.5.2. Network Status Report

WorkCAD3 Configurator has a status report tool with which you can access the information of the devices in the form of a list and even edit if necessary. To access this report, click on the button. ...

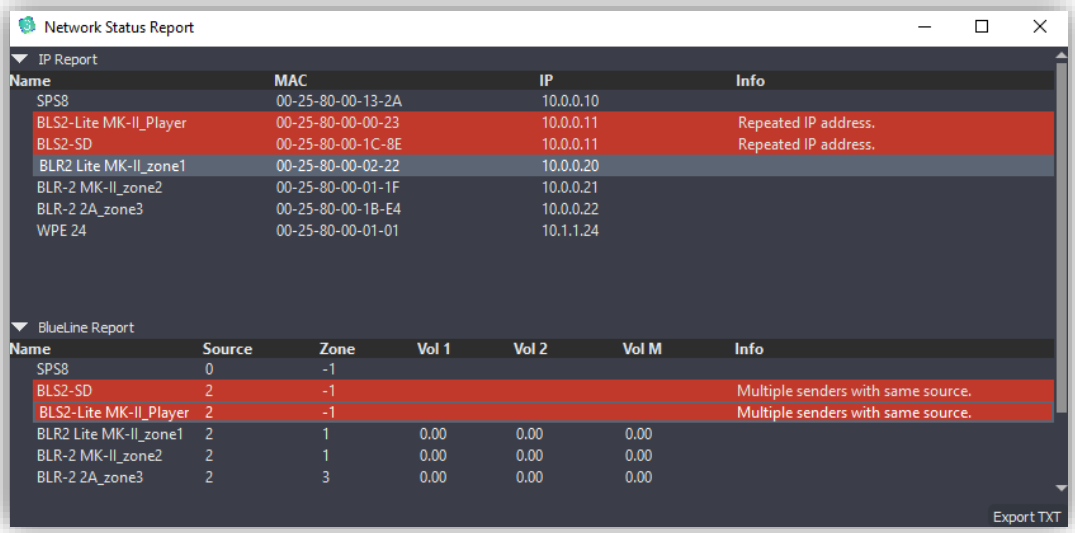




- **IP Report.** Report of MACs and IPs of the devices. The IP field is editable.
- **BlueLine Report.** Report about the channel number, zone and volume. The volume field will only have content for the case of the receivers. All fields are editable.

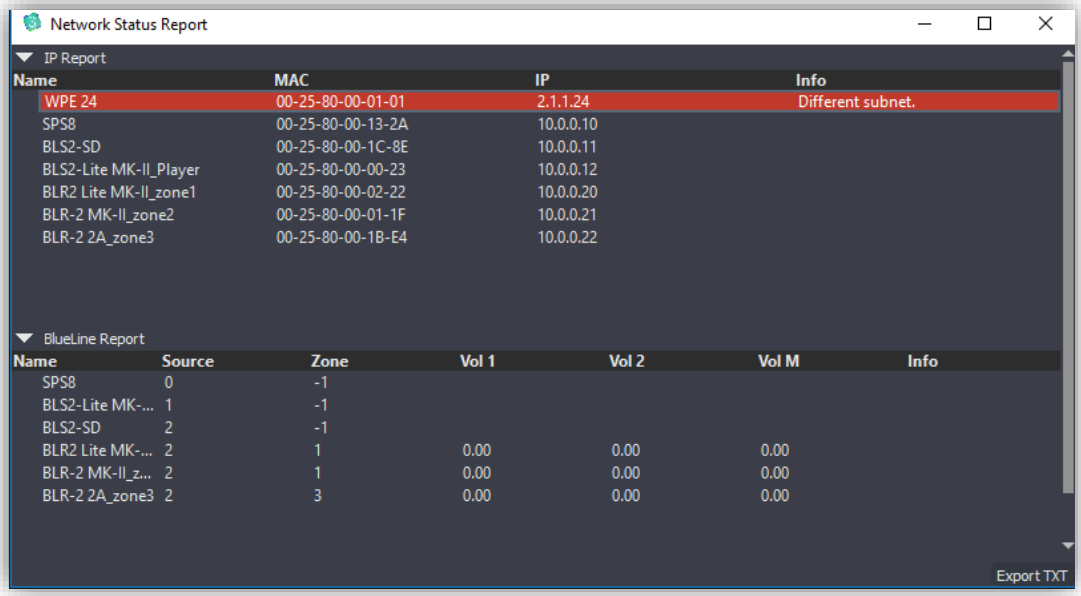
The status report will also inform you of possible conflicts in your project.

- **Repeated IP address.** It indicates that there is some IP address repeated. To fix it, change the repeated IP of one of the devices.

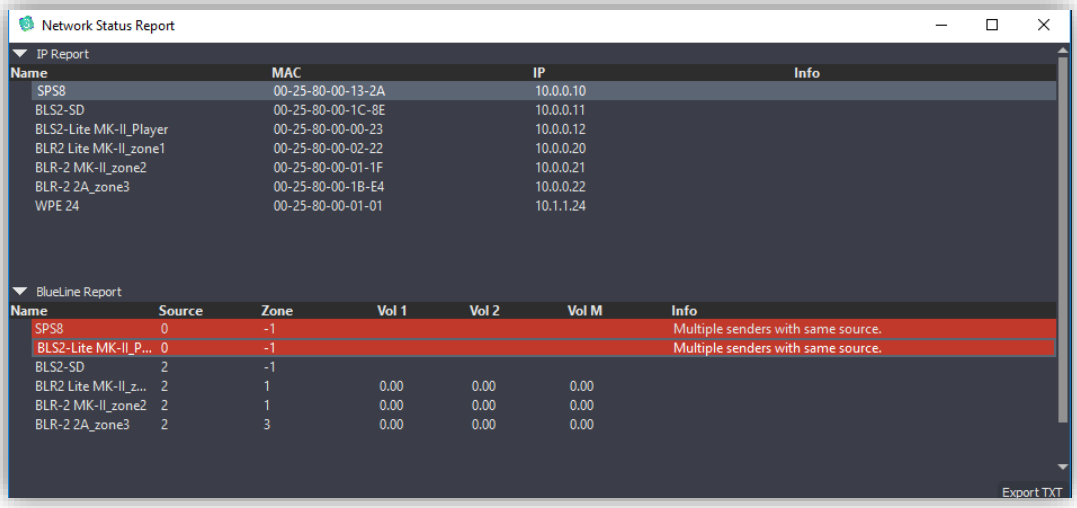


In case of repeated IP, it is advisable turn off one of the devices to change the IP.

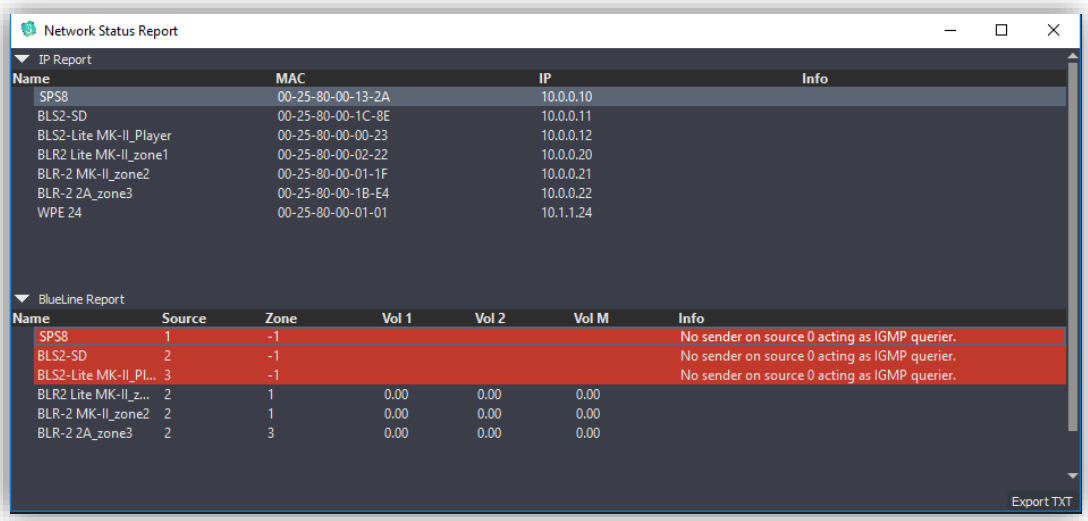
- **Different subnet.** It indicates that there is a device in another subnet than the PC. Change the IP address of the device to the subnet where your PC is located.



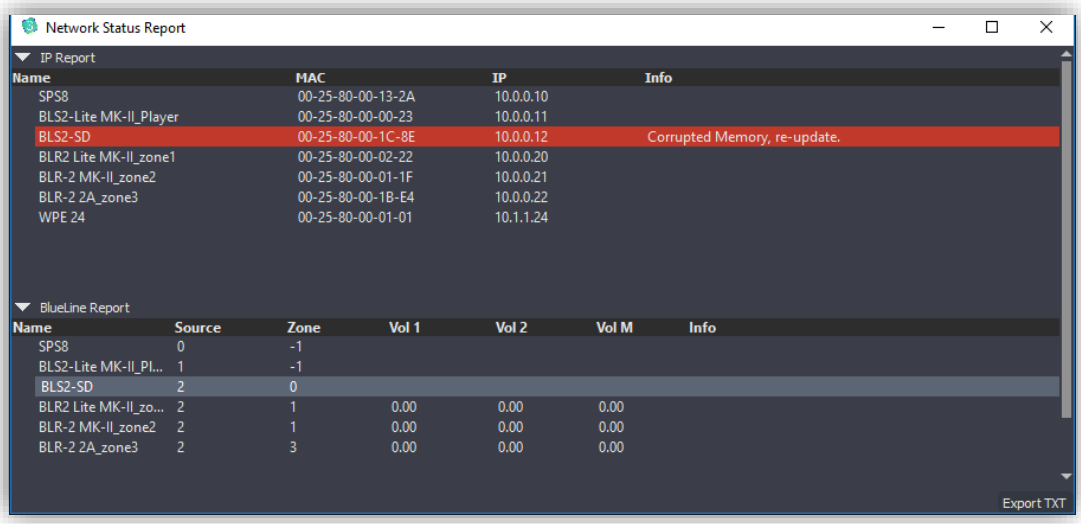
- **Multiple senders with same source.** Indicates that you have more than one sender emitting on the same channel. Change the channel of one of the devices in conflict to a free channel.



- **No sender on source 0 acting as IGMP querier.** Indicates that there is no IGMP querier in the network. Change the channel of one of the devices to 0. For more information, refer to the *OSC and Network set up manual*.



- **Corrupted Memory, re-update.** It informs that during the firmware updating an error has occurred and the device memory is corrupted.



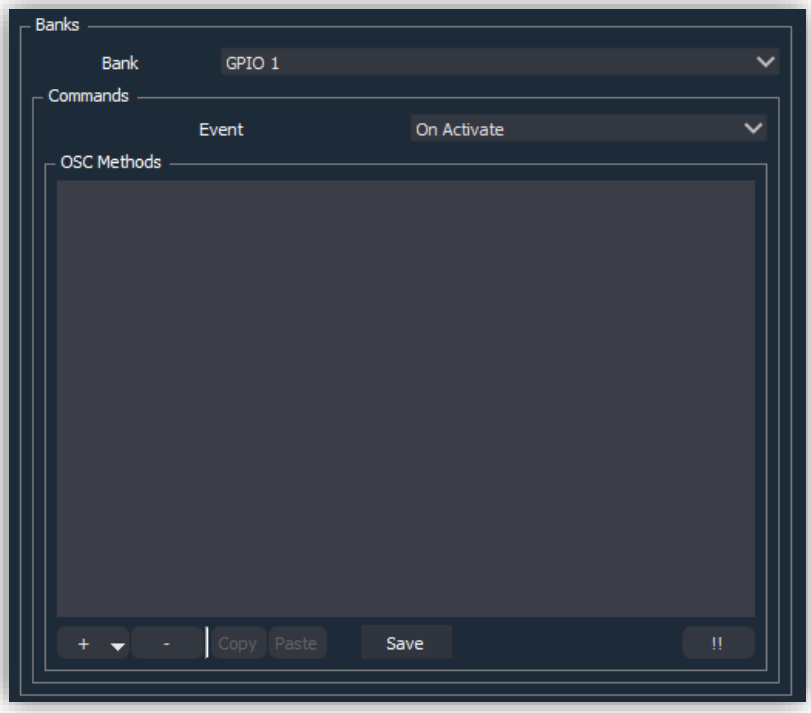
The Network status Report can be saved as .txt file using the button. Export TXT

After the device's configuration has be done, reviewing the set up with the Network status Report is advisable due it will inform you about any issue. On the other hand, if the exclamation mark appears on the Detected Devices table, please review the Network status Report too.

3.6. Sending OSC commands

All the devices that support OSC commands will include a section in their configuration interface dedicated to it. This section incorporates an OSC command editor that will do the OSC programming task easier.

Next, all the fields included in the OSC command programming section are detailed:



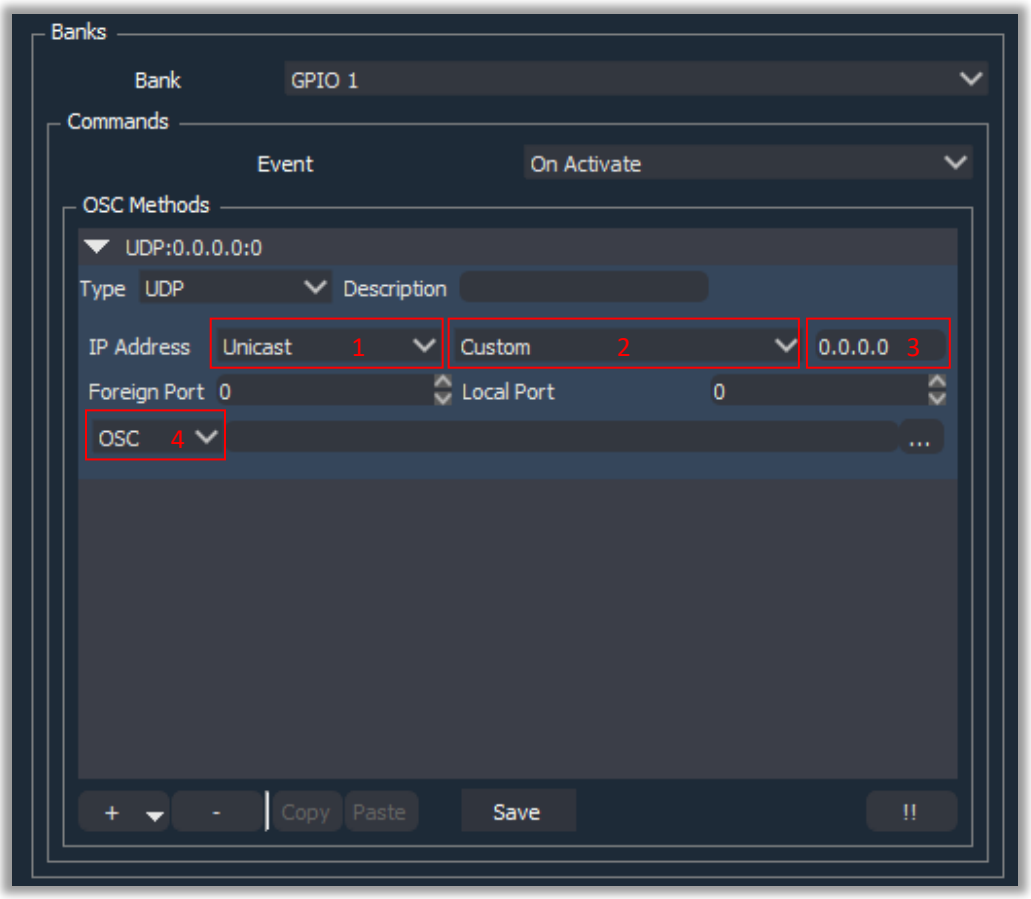
- **Bank:** Bank of UDP/OSC commands associated to the element that will execute it. The element will be a GPI or a programmable button (SPS8).
- **Event:** Indicates when we want to send the UDP/OSC command.
  - **On Activate.** When closing GPI or pressing button (SPS8).
  - **On Deactivate.** When opening GPI or releasing button (SPS8).

- **Button to add a command** . To add a UDP/OSC command.
- **Button to eliminate a command** . To eliminate a UDP/OSC command previously selected.
- **Button to copy a command.** . It copies the selected command to the clipboard.
- **Button to paste a command.** . It pastes command from the clipboard to the OSC list or to the selected command.

- **Test button** . Executes the commands included in the OSC Methods field.

- **Button to save commands** . Saves the commands programming. It is necessary to save the commands, in order they can be executed later.

To add a UDP/OSC command, click on the add button and select UDP. Then, the command to edit will appear, click on the arrow to display the fields to be edited.



- **Type:** Transport protocol. Currently, only UDP mode is available.

- **Description:** Description of the UDP/OSC command. Information that will appear when we close the command edition drop-down.

- **IP Address:**

  - **1° field**, IP address type:

    - **Unicast:** IP address of a specific device.

    - **Multicast:** IP address that includes a group of devices.

    - **Loopback:** IP address to send a UDP/OSC command to itself.

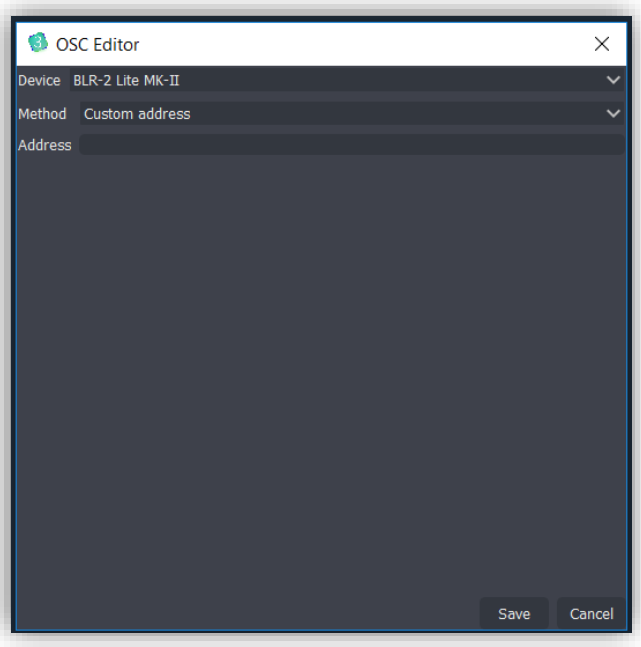
    - **Broadcast:** IP address to send the UDP/OSC command to all the devices in the network. (Only for third-party devices that accept Broadcast commands).

- 2º field. Selection of the device to send the UDP/OSC command. This field depends on the type field of IP address previously selected:
  - Unicast: All devices in the *Detected Devices* list will appear. Select the device to which you want to send the command. If you select custom it will be for a third-party device, not included in the list.
  - Multicast: The field disappears, since you cannot select any specific device.
  - LoopBack: The field disappears, the command is sent to itself.
  - Broadcast: The field disappears, since you cannot select any specific device.
- 3º field. It Indicates the IP address, the command will be sent. It depends on the IP address type field:
  - Unicast: IP address of the device selected in the 2nd field or, in the case of choosing custom, the IP address entered by the user.
  - Multicast: 239.192.0.100 (not editable), established by protocol.
  - LoopBack: 127.0.0.1 (not editable), established by protocol.
  - Broadcast: 255.255.255.255 (not editable), established by protocol.
  - Foreign Port: Destination port. It is automatically configured except for the Unicast/Custom case.
  - Local Port: Local port of reception, is automatically configured except for the Unicast/Custom case.
- 4º field. It Indicates the type of command to send:
  - OSC, command that complies the Open Sound Control protocol. Clicking on you can ... access to the OSC commands editor.
  - Custom, for ASCII "A" or Hexadecimal "H" commands.

3.6.1. OSC commands editor

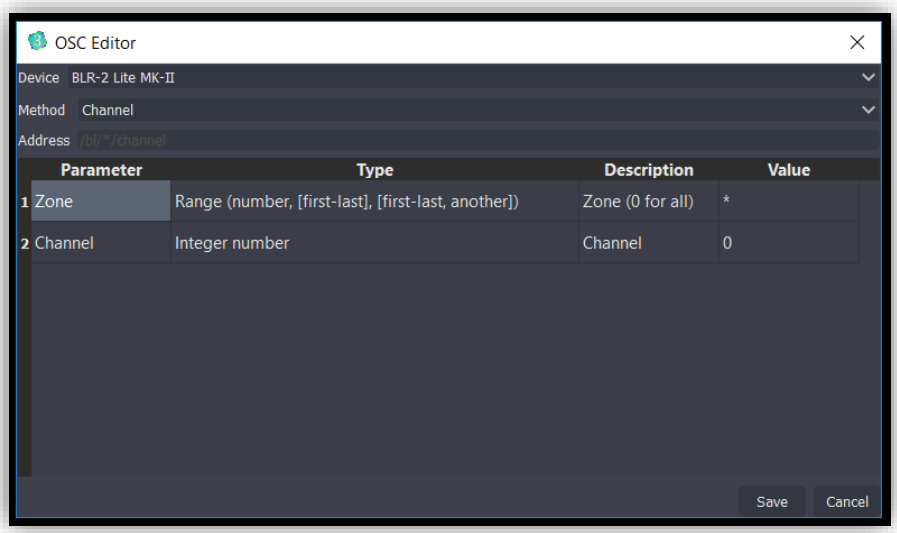
Using the OSC command editor you can access all the existing OSC commands to control the BlueLine and LightMouse devices in a quick and intuitive way. Next, you will find how to use it.

To access the OSC command editor, click on the dedicated button for it. The next window will appear:



- **Device**. If you are working in Unicast and have selected a device previously, it will be shown as selected. If you are working in Multicast, Loopback, or Broadcast, the device will have to be manually selected.

- **Method**. Field to select the type of OSC command that you want to send. In the ***OSC and Network set up manua***l, you will find out the meaning of each command. After selecting the type of OSC command to be used, the fields to be edited will appear. Depending on the chosen method the fields will vary.



- **Address**. Path of the OSC command that defines the method. For more information, refer to the *OSC and Network set up manual*. This field is automatically filled according to the selected method and the entered values.
    - **Parameter.** Parameters contained in the OSC command.
    - **Type.** Type of data to enter for the parameter.
    - **Description.** Additional description of the parameter.
    - **Value.** Value of the parameter.
- **Save.** Button to save the OSC command in the bank.
- **Cancel.** Button to cancel and exit the OSC command editor.

The programming of OSC commands will remain stored in each device until it is decided to modify or delete it.

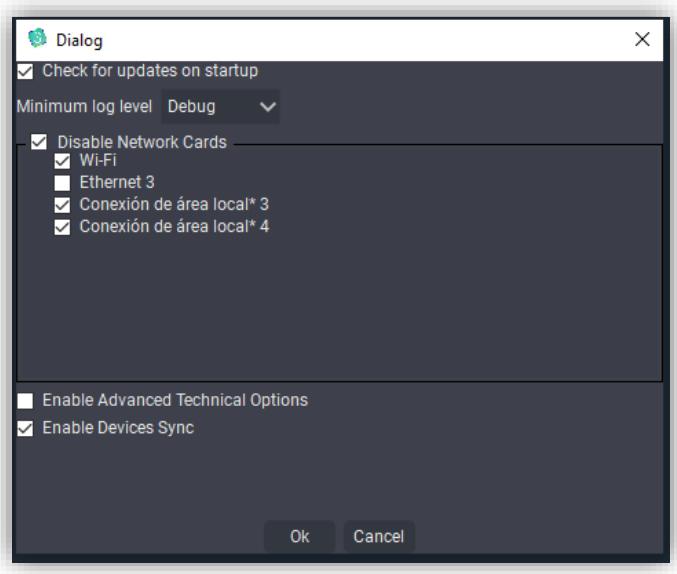
3.7. Device Synchronization

From version 3.5.10 of WorkCAD3 it is possible to create projects offline or online. So that later we can synchronize the data saved in the project with the devices. Next, it is explained how to perform the synchronization for both cases.

3.7.1. Offline projects synchronization

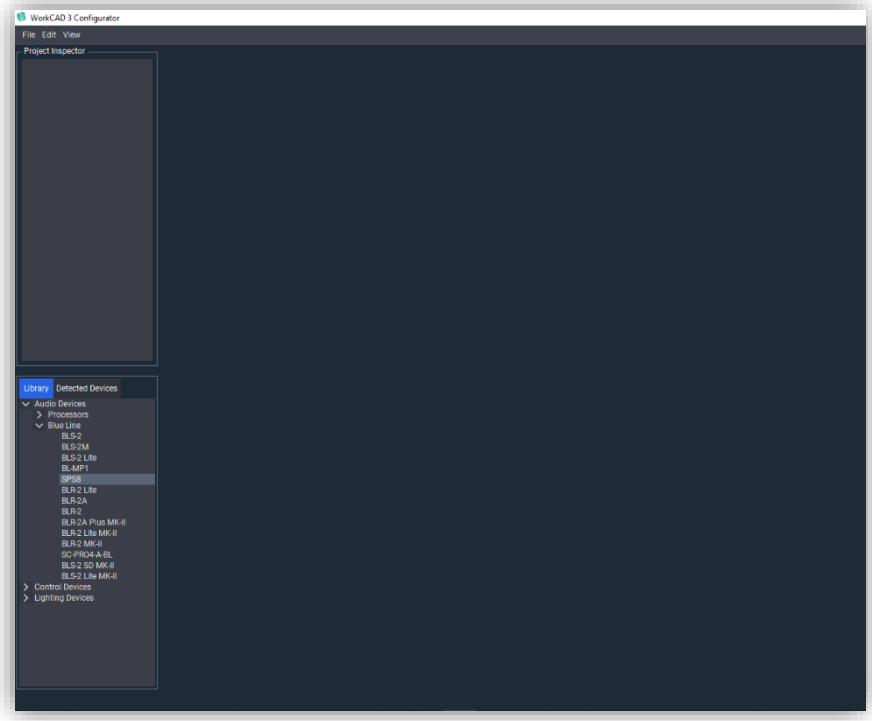
These are projects that are based on library devices, whose configuration will be loaded into physical devices.

1. Enable *Enable Enable Devices Sync* from the *View / View Options* toolbar.



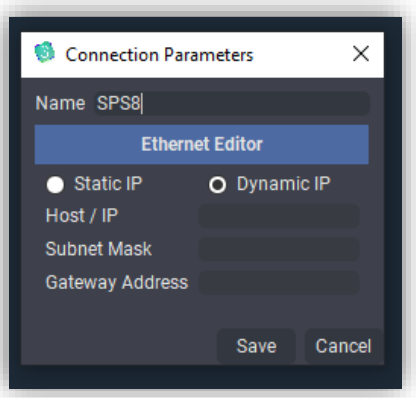
2. Added library devices.

Click on the Library tab and add the device that will include your installation by double clicking on it.



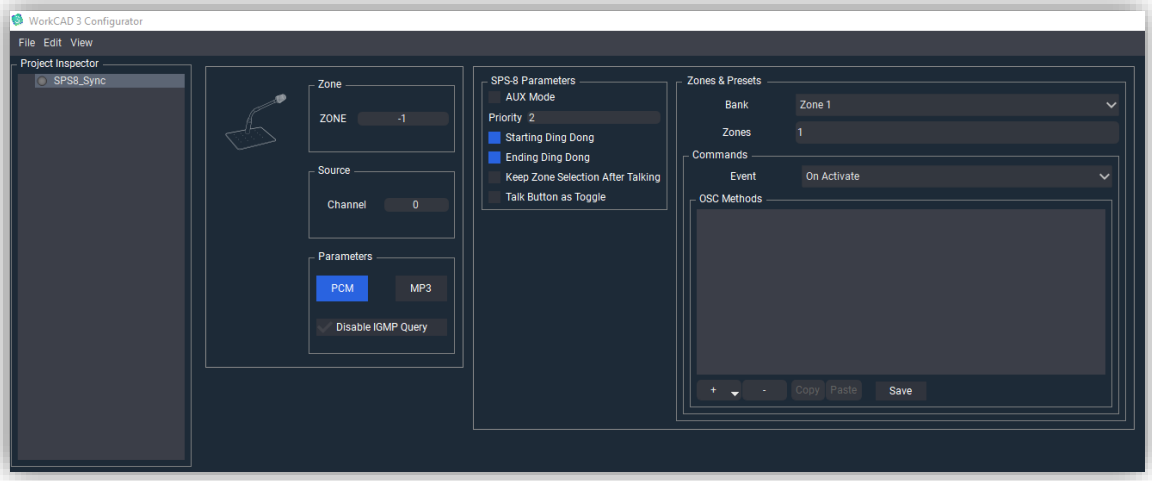
3. Configuration of device parameters..

    - **Connection Parameters**. Double clicking on the device opens the following window.



- **Name.** Name of the device.
- **Static IP radio button.** Static IP address selection for the device.
- **Dynamic IP radio button**. Dynamic IP address selection for the device.
- **Host/IP**. IP address of the device. Editable only in *Static IP mode*.
- **Subnet Mask**. Subnet Mask of the device. Editable only in *Static IP mode*.
- **Gateway Address**. Predefined gateway address. Editable only in *Static IP mode*.

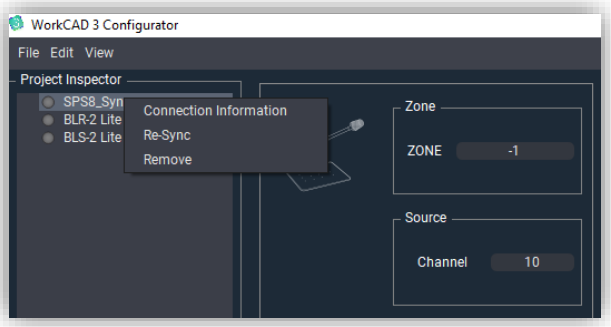
- **Rest of parameters.** After pressing the Save button in the previous window, the device goes up to the Project Inspector. Click on it to open its configuration interface.



Then modify the parameters according to your needs. The gray led next to the device name indicates that it is not associated with any physical device.

Add as many devices as you like.

If you want to modify the network parameters previously entered, right click on the device name. And the following window will appear.

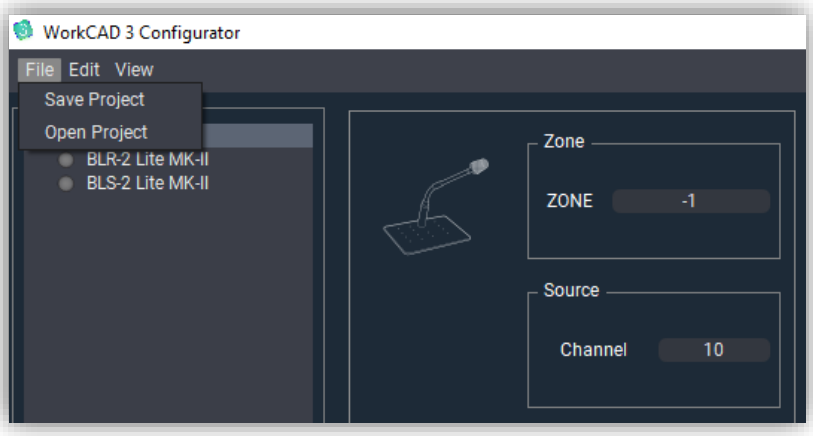


- **Connection Information.** Click on this option to access the network parameters again.
- **Re-Sync**. Tap on this option if you want to Resynchronize the device. This option will be seen later.

- **Remove**. Click on this option if you want to remove the device from the Project Inspector. Your information will be lost.

4. Saving devices in project.

Once the parameters of one or more devices have been configured. The project will be saved. To do this, go through the toolbar to File / Save Project and choose the desired path. The project will be saved in a file with the extension .wpf3_pj.

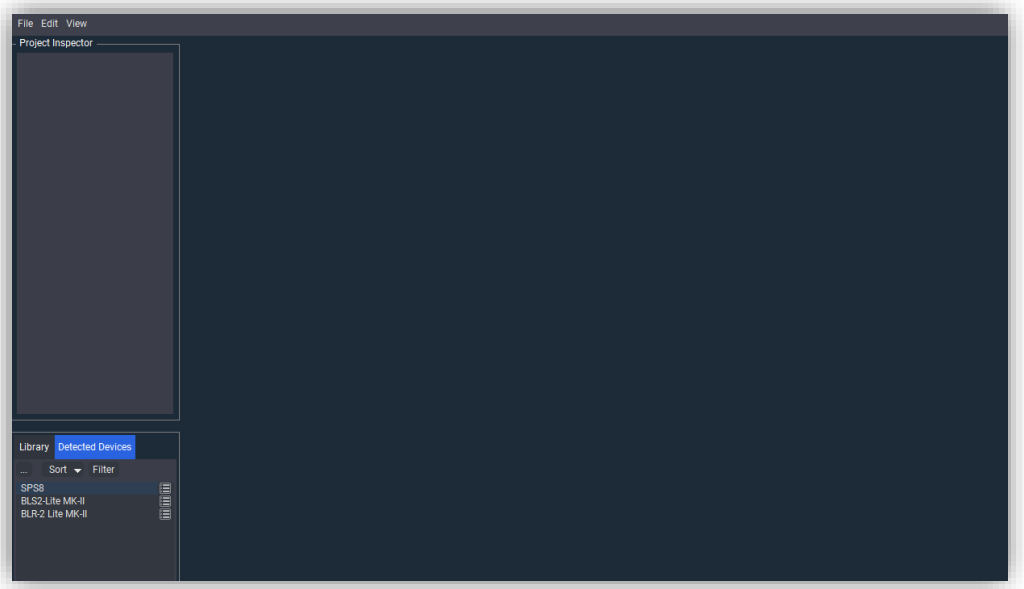


.

5. Device synchronization

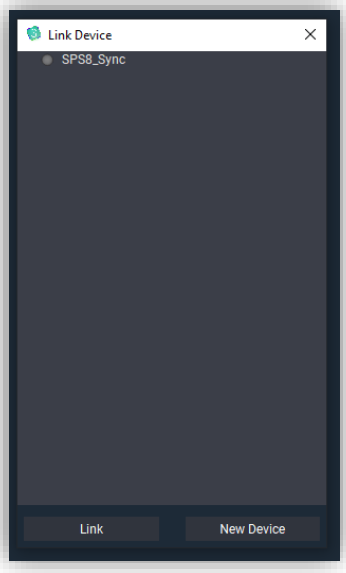
6. Once your project is saved, you will be ready to synchronize with the physical devices, at the appropriate time.

7. To synchronize, connect your PC to the same LAN as the physical devices. The devices will appear in WorkCAD3 Configurator Detected Devices.



Next, load the project you saved earlier via the File / Open Project toolbar. The virtual devices will appear in the Project Inspector with the parameters that you configured.

The synchronization of devices will be done one by one. To do this, double click on the physical device that you want to synchronize, from the Detected Devices tab. The Link Device window will open, where you have to select the virtual device with which you want to link.



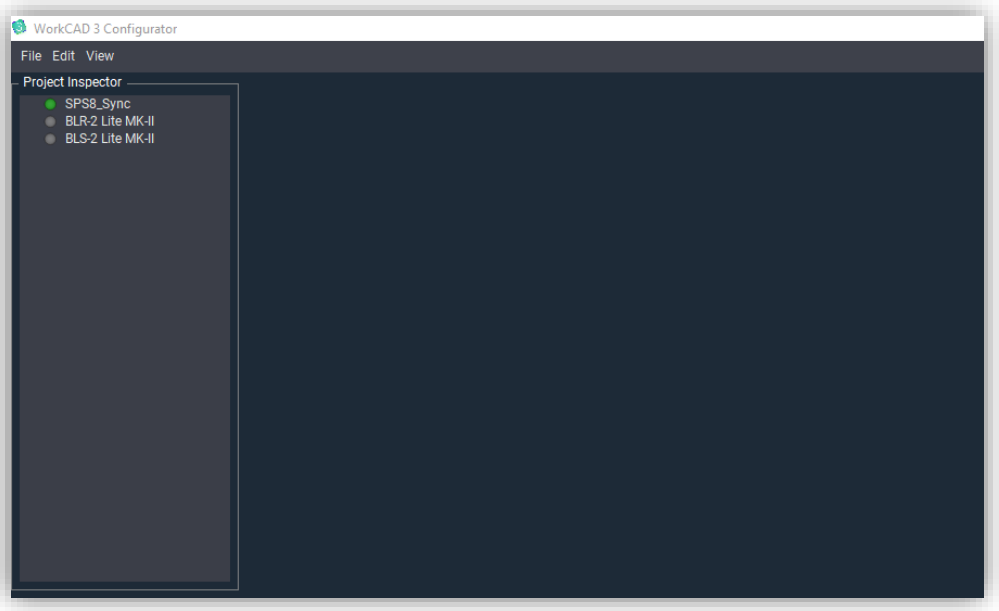
- **Link**. It allows to link with the virtual device.
- **New Device**. It allows uploading the physical device to the Project Inspector to operate with it without synchronizing with any virtual device.

After selecting the device in the previous window and pressing the Link button, the Synchronice Device Data window will open.

- **Property.** Parameter to be synchronized.
- **State**. Sychronization state
  - **Green LED** . The virtual and physical device parameter has the same data.
  - **Red LED** . The parameter of the virtual and physical device is not the same.
  - **Local Data**. Virtual device data.
  - **Remote Data.** Physical device data
  - **Choose Valid Data**.
    - **Local Data**. The data that will prevail is that of the virtual device. Local information saved on the PC.
    - **Remote Data**. The data that will prevail are those of the physical device. Remote information saved in the memory of the physical device.

We choose *Local Data* as valid data. This is followed by the synchronization of the device. Please do not disconnect the device during this process.

Once the device is synchronized, the LED associated with the device located in the Project inspector will turn green.

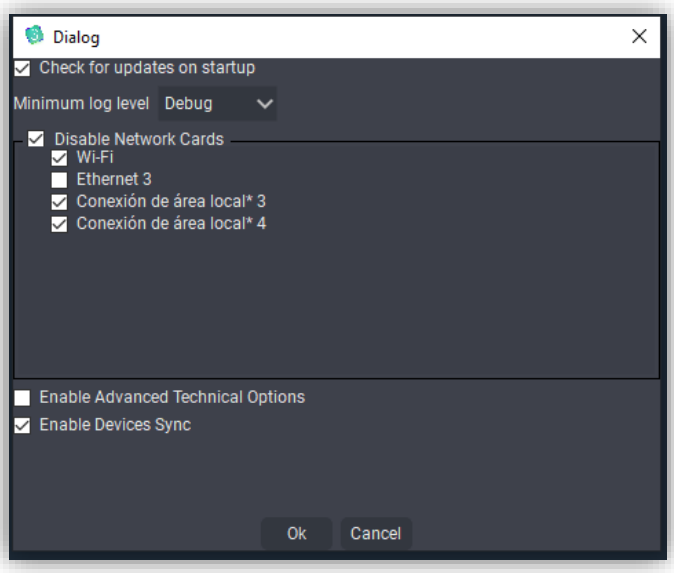


Then do the same for the other devices.

3.7.2. Online projects synchronization

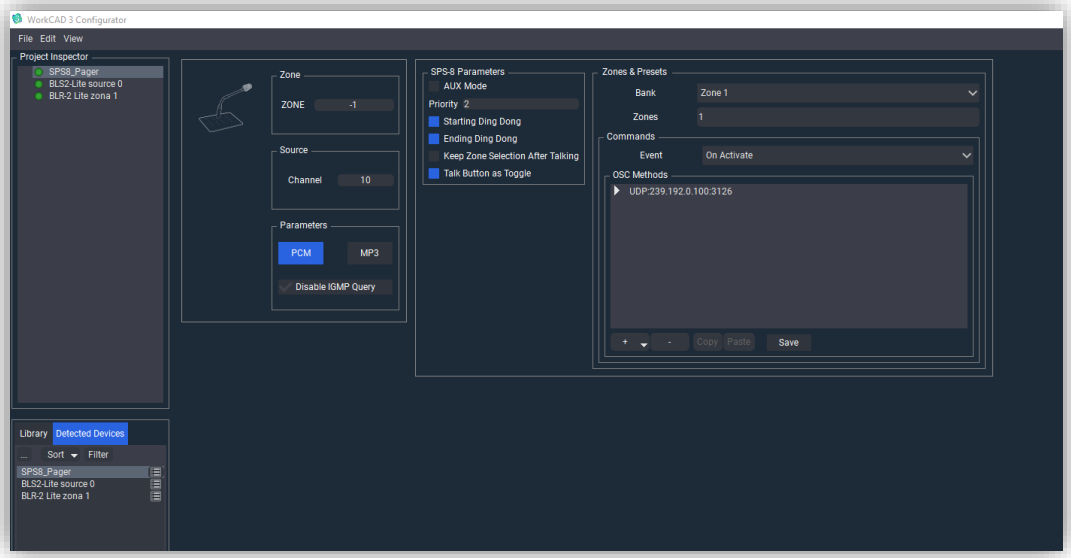
These are projects where we start from physical devices with a certain configuration, which we want to save, to resynchronize in the future.

1. *Enable Enable Enable Devices Sync from the View / View Options toolbar.*



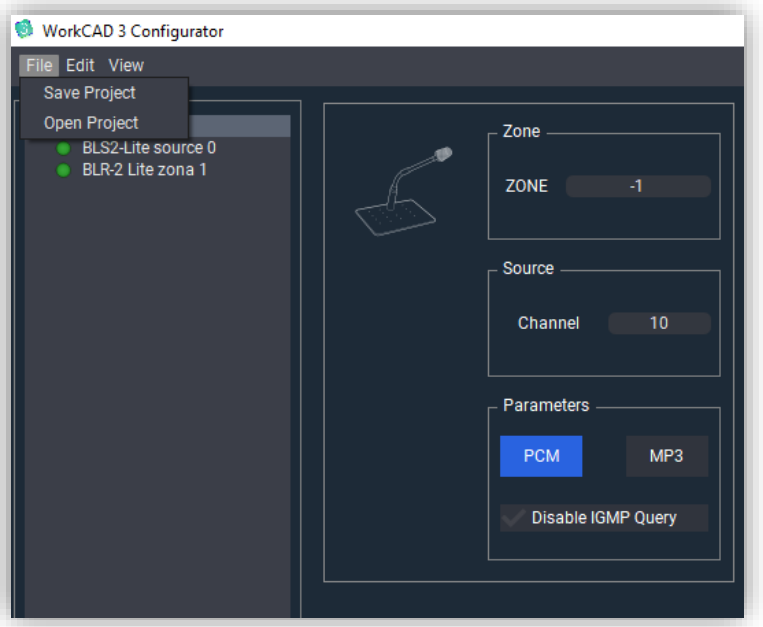
2. Saving devices in project.

First of all, we configure the devices of our installation through its configuration interface.



Then the project will be saved. To do this, go through the toolbar to File / Save Project and choose the desired path. The project will be saved in a file with the extension .wpf3_pj.

3. Device synchronization



4. Once your project is saved, you will be ready to synchronize, either because you want to restore the configuration on the same devices or because you want to load it on new devices.

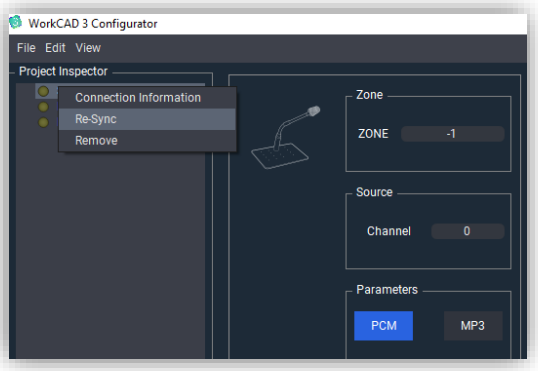
Both cases are described below.

- Synchronization with the same devices.

To synchronize, connect your PC to the same LAN as the physical devices. The devices will appear in the WorkCAD3 Configurator.

Then load the project that you saved earlier via the File / Open Project toolbar. The virtual devices will appear in the Project Inspector with the parameters that you configured. The olive green LEDs indicate that the information stored in the virtual devices was obtained from the physical devices found in the Project inspector.

Then right-click on the virtual device select the Re-Sync option.



The Synchronice Device Data window will then open.

- **Property.** Parameter to be synchronized.
- **State**. Sychronization state
    - **Green LED** . The virtual and physical device parameter has the same data.
    - **Red LED** . The parameter of the virtual and physical device is not the same.
    - **Local Data**. Virtual device data.
    - **Remote Data.** Physical device data
    - **Choose Valid Data**.
        - **Local Data**. The data that will prevail is that of the virtual device. Local information saved on the PC.
        - **Remote Data**. The data that will prevail are those of the physical device. Remote information saved in the memory of the physical device.

We choose Local Data as valid data. This is followed by device synchronization. Please do not disconnect the device during this process.

Once the device is synchronized, the LED associated with the device located in the Project inspector will turn green.

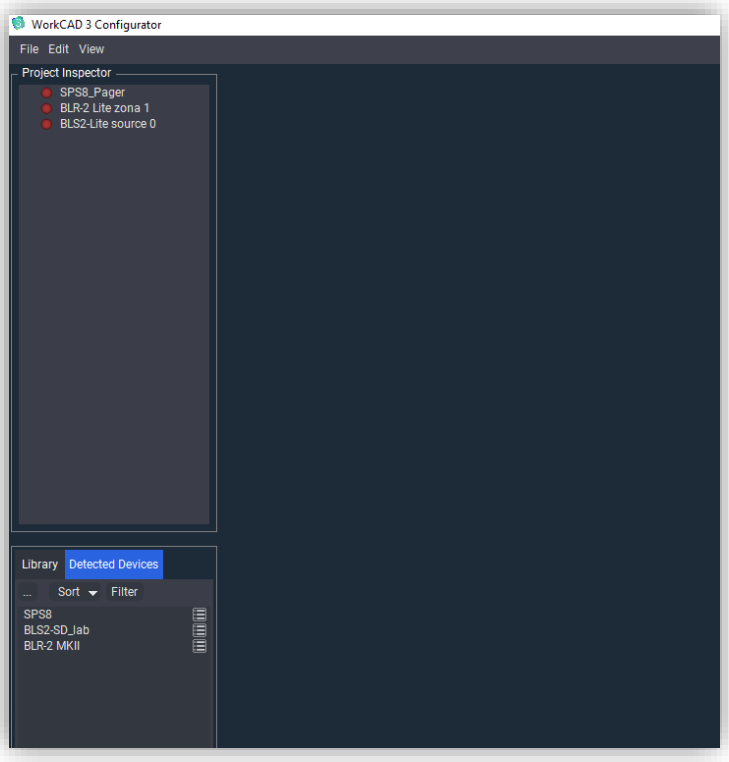
Do the same for the other devices.

- Synchronization with new devices

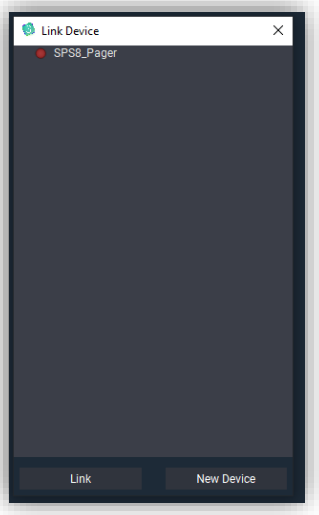
To synchronize, connect your PC to the same LAN as the physical devices. The devices will appear in the WorkCAD3 Configurator.

Then load the project that you saved earlier via the File / Open Project toolbar. The virtual devices will appear in the Project Inspector with the parameters that you configured. The olive green LEDs indicate that the information stored in the virtual devices was obtained from the physical devices found in the Project inspector.

The virtual devices appear with the LED in red since they never had a connection with the physical devices.



The synchronization of devices will be done one by one. To do this, from the *Detected Devices* tab, double click on the physical device that you want to synchronize. The *Link Device* window will open, where you have to select the virtual device with which you want to link.



- **Link**. Allows you to link with the virtual device.
- **New Device**. It allows uploading the physical device to the Project Inspector to operate with it without synchronizing with any virtual device.

After selecting the device and pressing the Link button, the *Synchronice Device Data* window will open.

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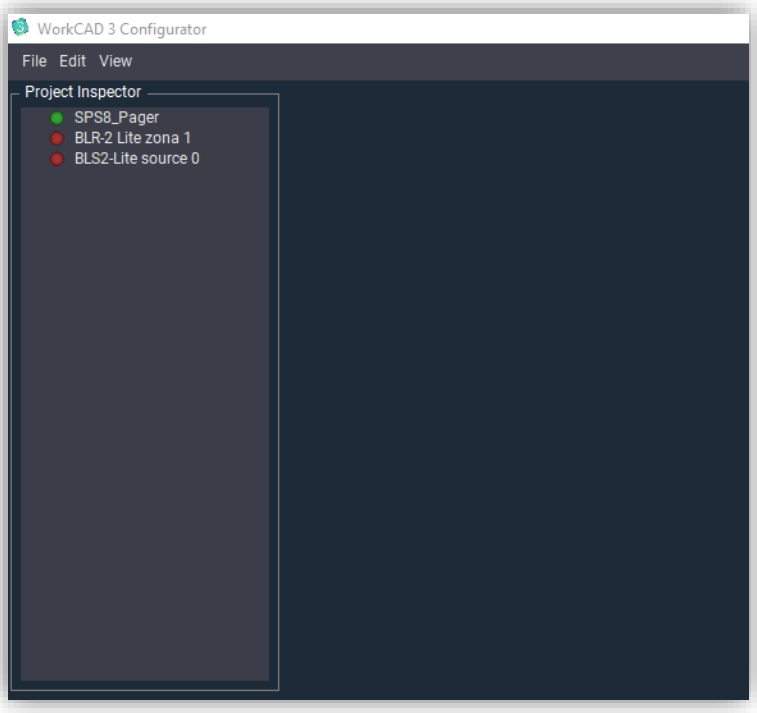
- **Property.** Parameter to be synchronized.
- **State**. Sychronization state
    - **Green LED** . The virtual and physical device parameter has the same data.
    - **Red LED** . The parameter of the virtual and physical device is not the same.
    - **Local Data**. Virtual device data.
    - **Remote Data.** Physical device data
    - **Choose Valid Data**.
        - **Local Data**. The data that will prevail is that of the virtual device. Local information saved on the PC.
        - **Remote Data**. The data that will prevail are those of the physical device. Remote information saved in the memory of the physical device.

We choose Local Data as valid data. This is followed by device synchronization. Please do not disconnect the device during this process.

Once the device is synchronized, the LED associated with the device located in the *Project Inspector* will turn green.



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